

# DOUGLASS COMMUNITY CENTER STORMWATER RETROFIT PROJECT

## PUBLIC STAKEHOLDER SEMI-FINAL DESIGN MEETING

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GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# AGENDA

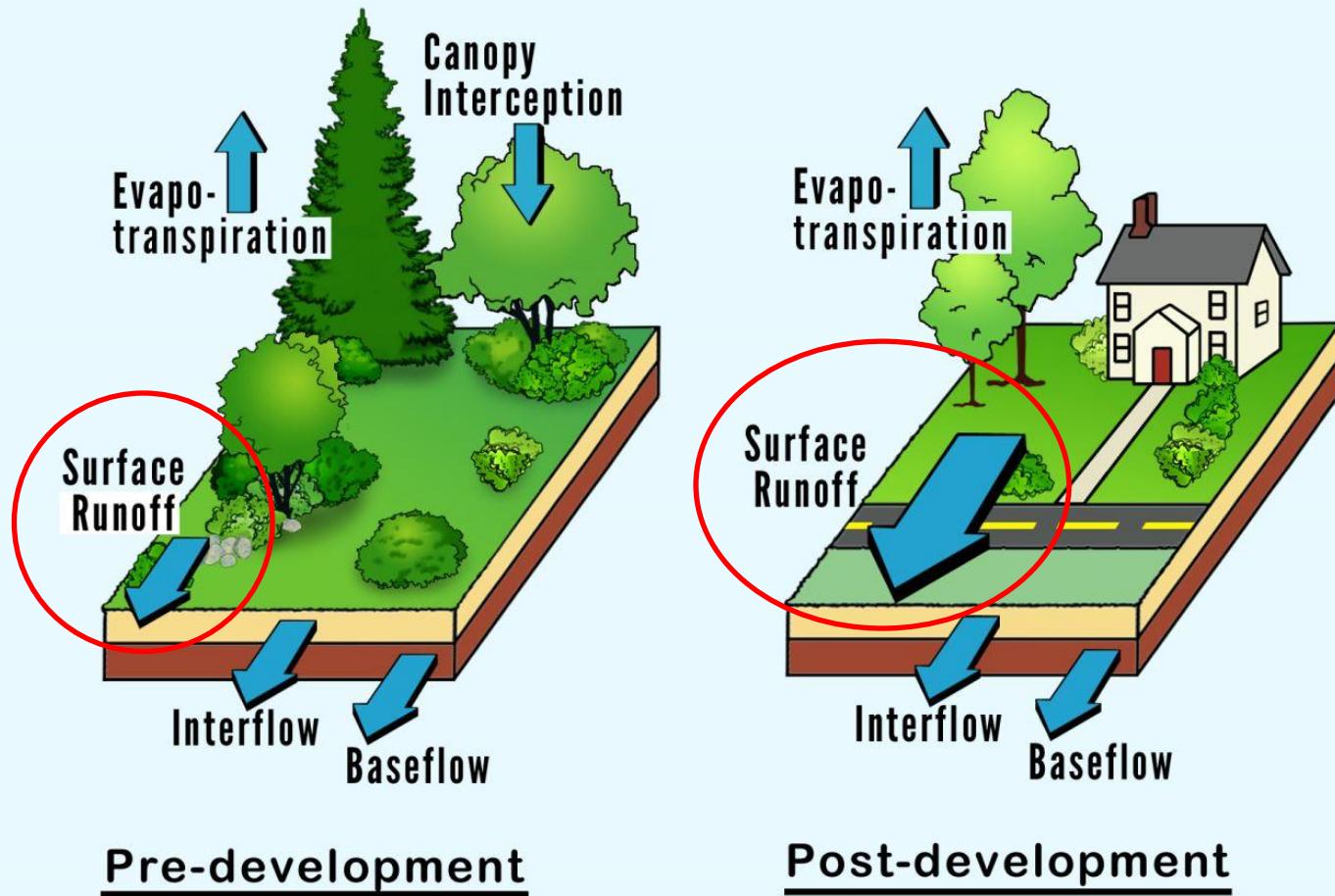
- Project Area & Background
- Existing Conditions
- Project Objectives
- Restoration Approach
- Project Design
- Timeline
- FAQs
- Q&A

# PROJECT LOCATION



# BACKGROUND

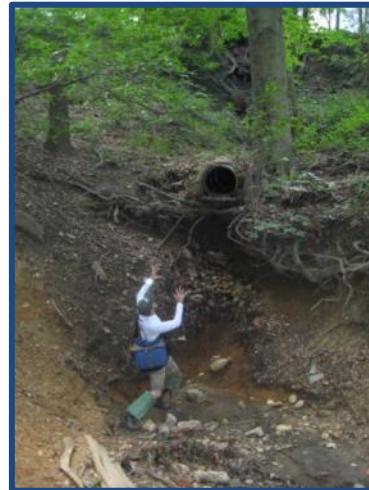
**Figure 1.1 Water Balance at a Developed and Underdeveloped Site**  
(Source: Schueler, 1987)



Surface runoff is minimal in an undeveloped site, but dominates the water balance at a highly impervious site.

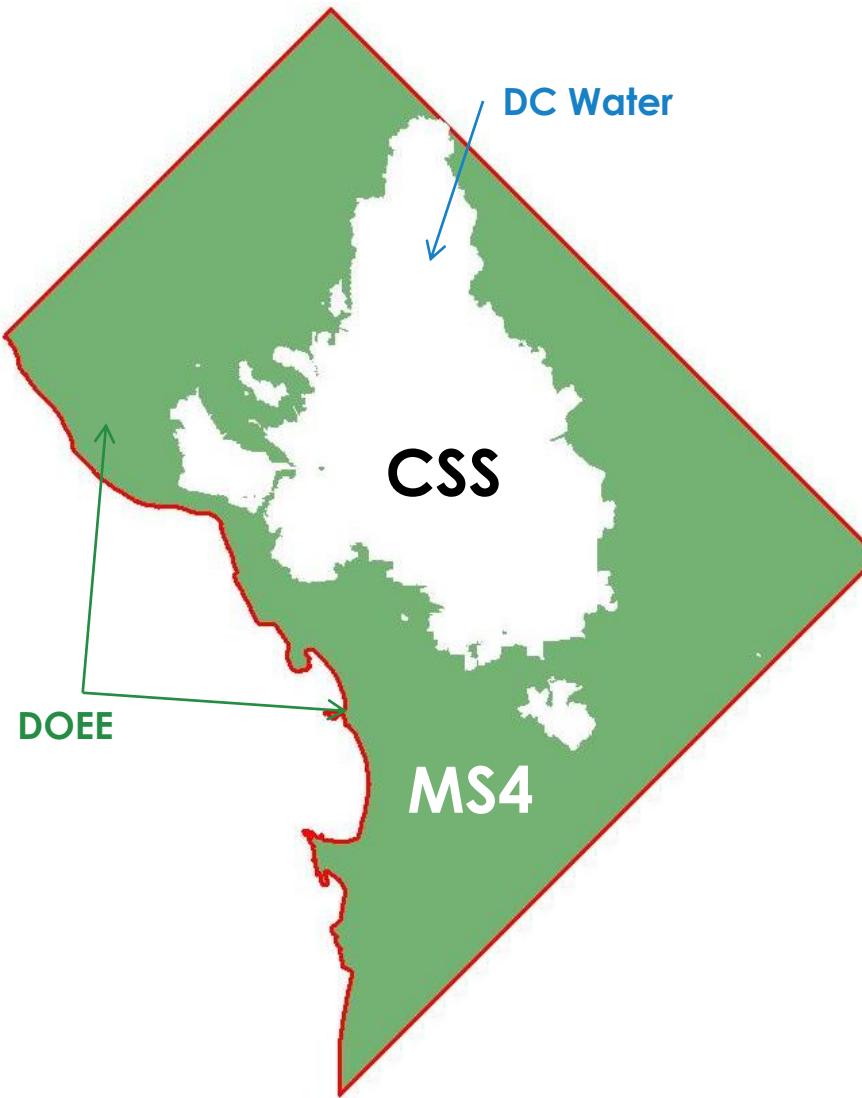
# PROBLEM OF STORMWATER POLLUTION

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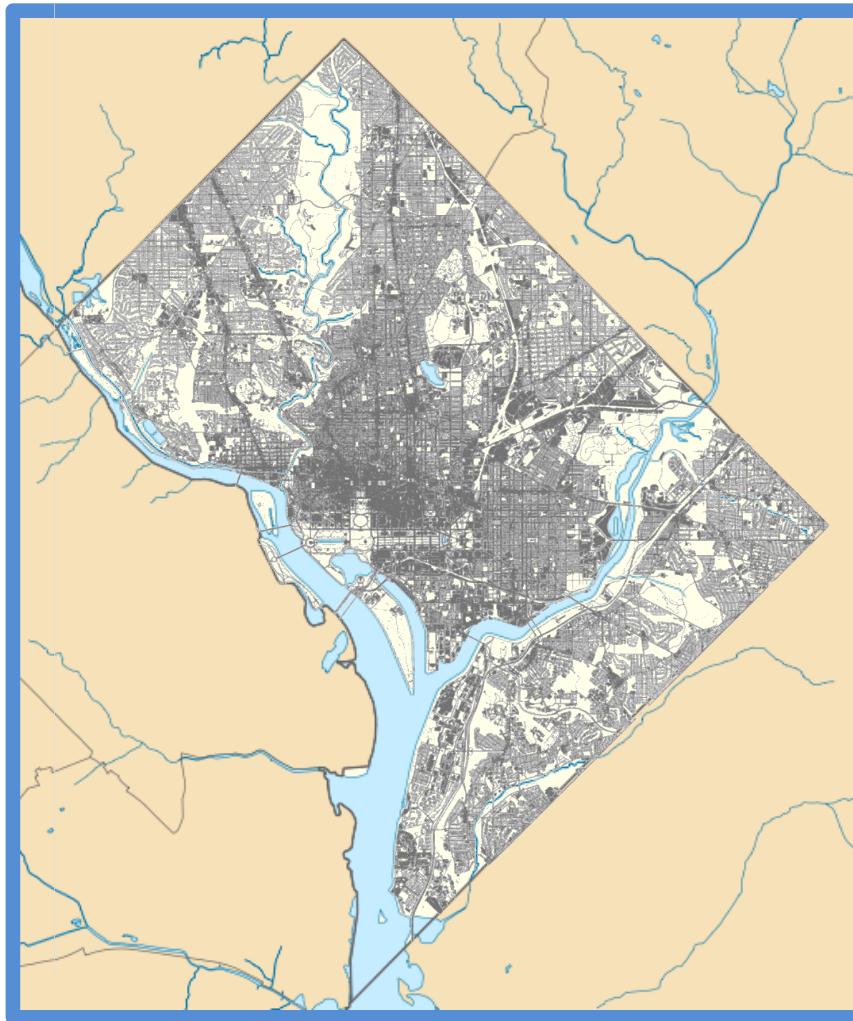
# DC'S RESTORATION APPROACHES

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# DISTRICT OF COLUMBIA LAND USE

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Total Area  
 $68.3 \text{ mi}^2$

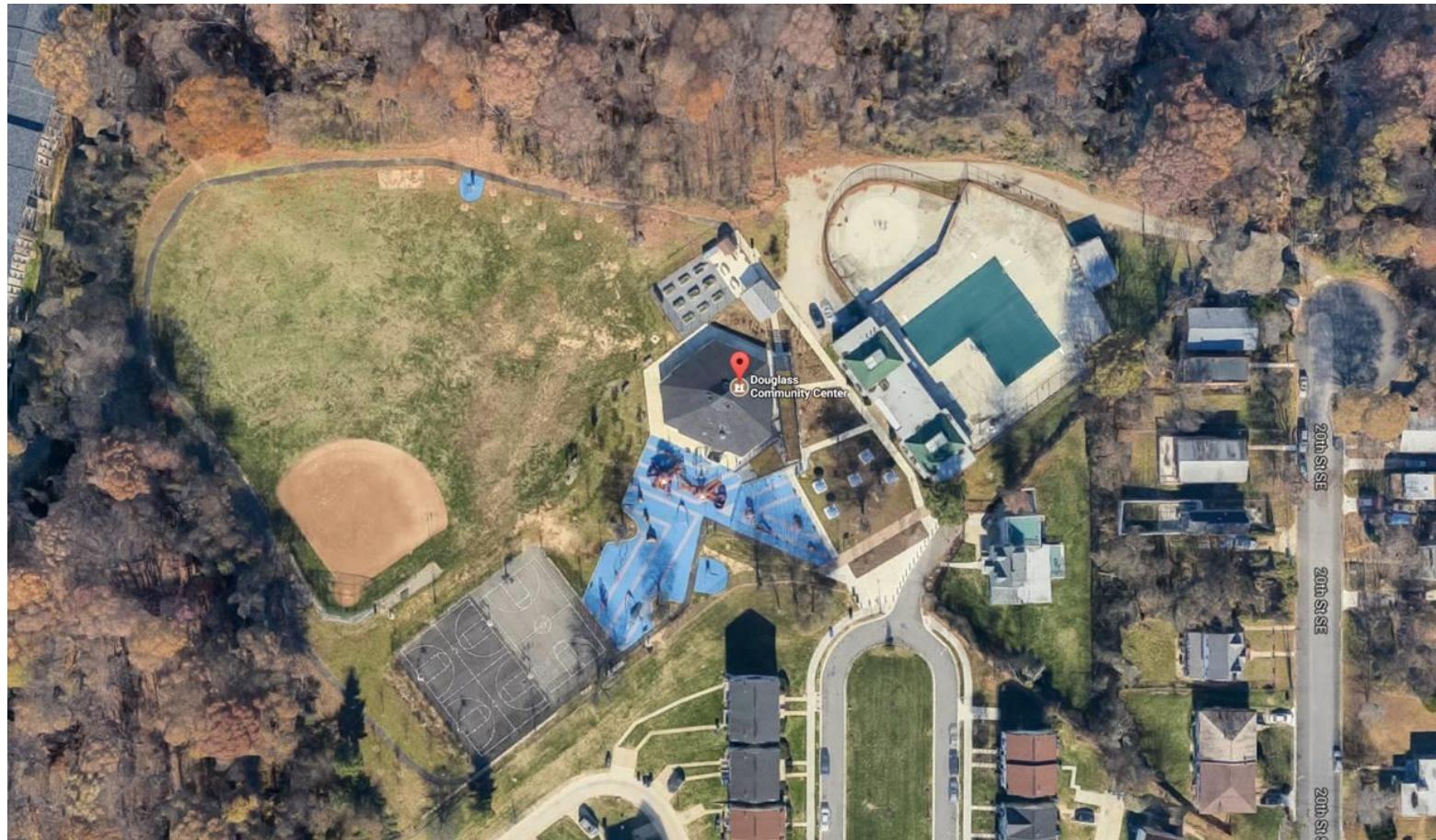
Land Area  
 $61.3 \text{ mi}^2$

Impervious Area  
 $26.6 \text{ mi}^2$   
Approx 43%  
of Land Area

*A single 1.2 inch storm falling on this area produces about 525 million gallons of stormwater runoff.*

# EXISTING CONDITIONS

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# PROJECT OBJECTIVES

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- Treat maximum amount of stormwater from the site in the most cost effective way
- Work only on District land
- Minimal impacts to the community
- Development of a community amenity
- Educational opportunities



# RESTORATION APPROACHES

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Most stormwater practices all work the same way: “they collect stormwater runoff and use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat” (EPA).

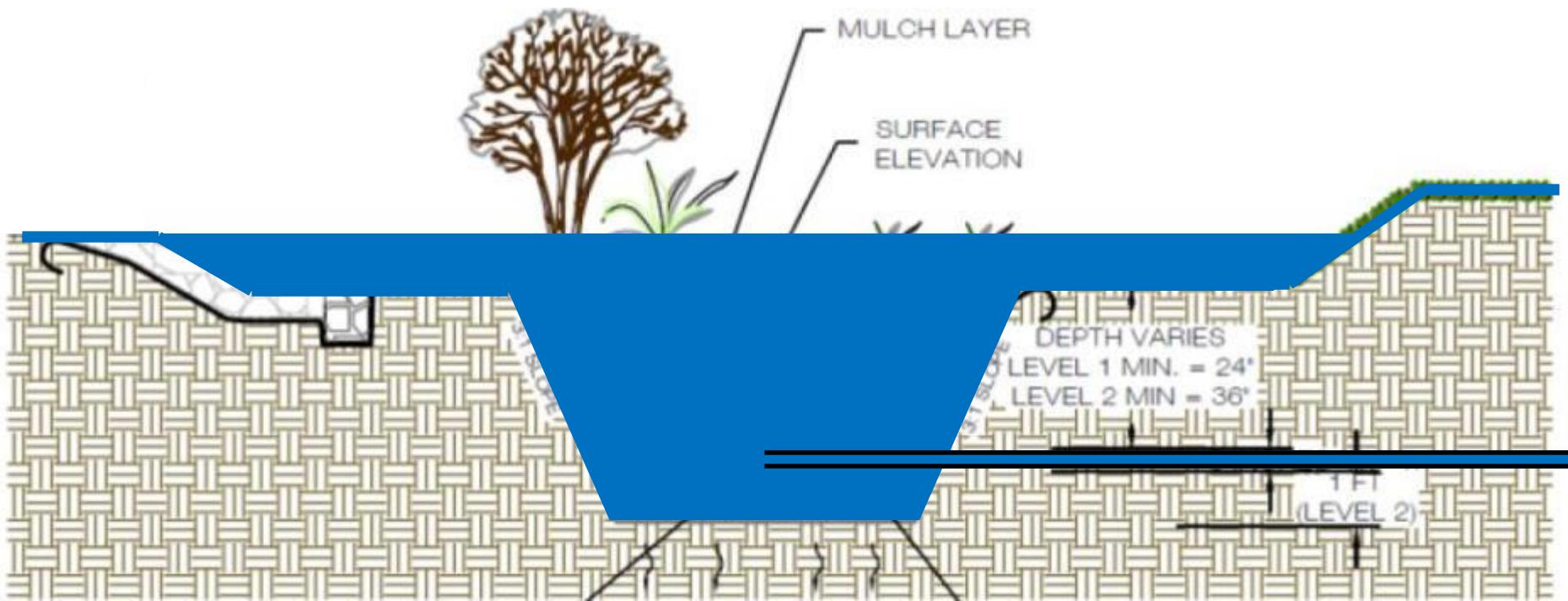
*Slow it down, Spread it Out, Soak it In !*

# BIORETENTION

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# BIORETENTION: HOW IT WORKS



# BIOSWALES





## TREES, SHRUB, PERENNIAL, FERNS & GRASS IMAGES



Blue Star (AMG TAB)

Marginal Wood Fern (DRY MAR)

Blue Flag Iris (IRI VER)

Wild Bergamot (MON CLA)



Cinnamon Fern (OSM CIN)

Switch Grass (PAN SHE)

Black-eyed Susan (RUD HIR)

Goldenrod (SOL FIR)

Ironweed (VER NOV)

### DOUGLASS PLANT SCHEDULE

PLANT	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION	REMARKS
HERB	2	Scallions / Heritage / Heritage River Birch	8'-10'	BBB	
SHRUB	15	Aronia arbutifolia 'Shrubby' / Shrub Red Chokeberry	24"-36"	Cont.	
ANG BR	3	Cephaelis occidentalis / Rosmarinabush	24"-36"	Cont.	
CFP DCC	16	Heuchera 'Shamrock' / Shamrock Hibiscus	24"-36"	Cont.	
ILC SHA	2	Ilex verticillata 'Northern Gentleman' / Southern Gentleman Winterberry Holly	24"-36"	Cont.	
ILC XOU	13	Ilex verticillata 'Sparkleberry' / Sparkleberry Winterberry	24"-36"	Cont.	
ILC SPA	33	Ilex virginiana 'Leda Harry TM' / Little Harry Virginia Sweetpepper	3 gal	Cont.	
ITE LIT	31	Ilex virginiana 'Greatleaf' / Greatleaf Fragrant Summer	3 gal	Cont.	
RHU GRO	11	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal	Cont.	
VIB MUD	9	Viburnum x 'Moorland' / Moorland Smooth Viburnum	24"-36"	Cont.	

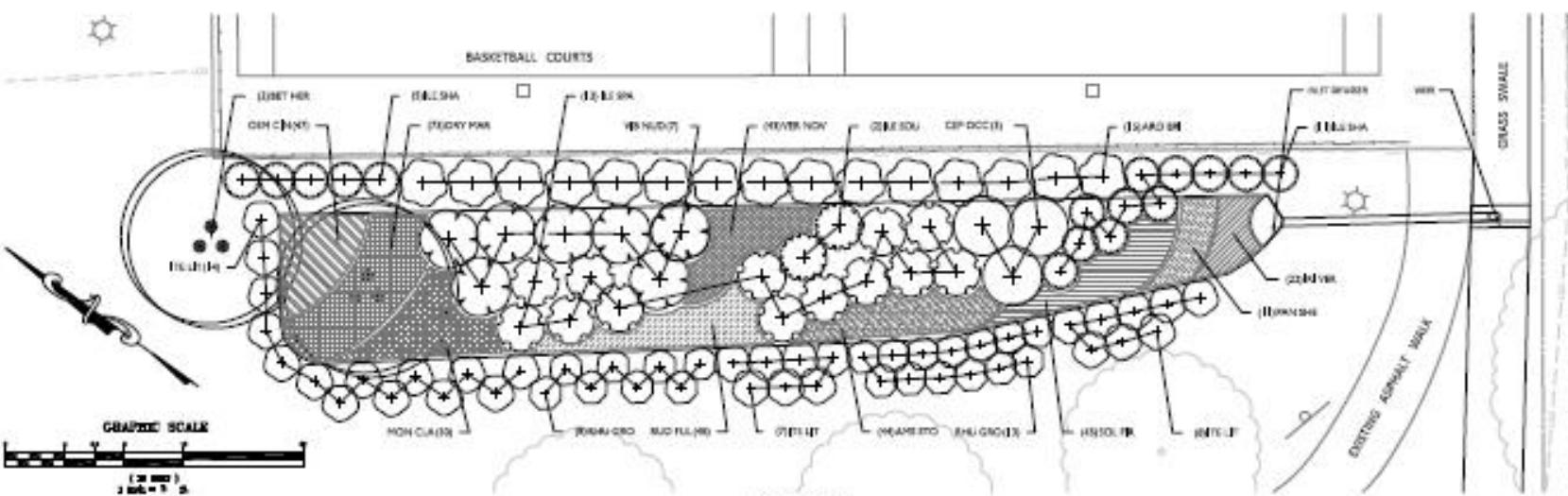
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION	SPACING	REMARKS
AMH STD	44	Aristea lateritia 'Storm Cloud' / Storm Cloud Gloriosa	1 gal	Cont.	12" o.c.	
DRY MAR	33	Polygonatum multiflorum / Marginal Wood Fern	1 gal	Cont.	12" o.c.	
ILC VER	32	Ionantha 'Blue Ridge'	1 gal	Perf.	12" o.c.	
MON CLA	32	Polystichum aculeatum 'Cinnabarinum' / Cinnabar Fern	1 gal	Cont.	12" o.c.	
OSM CIN	47	Clematis ligusticifolia / Clematis Fern	1 gal	Cont.	12" o.c.	
PAN SHE	11	Panicum virgatum 'Standart' / Switch Grass	1 gal	Perf.	18" o.c.	
RUD TUL	48	Rudbeckia 'Goldsturm' / Gold-storm Coneflower	1 gal	Perf.	12" o.c.	
SOL FIR	49	Solidago rugosa 'Fireworks' / Fireworks Goldenrod	1 gal	Perf.	12" o.c.	
VER NOV	42	Vernonia novae-angliae / New York Ironweed	1 gal	Cont.	12" o.c.	

All Agro

Alt: 'Goldsturm'

CHARTED SCALE  
(in mm)  
2500 x 500

PLANTING PLAN  
SCALE 1:10



# PROJECT TIMELINE

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- May 2019: contract awarded
- May – August 2019: field assessment (topographic survey, geotechnical investigations etc.)
- August – January 2020: design development
- 3 public meetings:
  - Concept designs on 9/16/19
  - Semi-final designs (~65%) ON 12/16/19
  - Construction kickoff meeting (timeline): TBA
- May 2020: construction complete\*
- One year of post-construction maintenance included in contract

# FAQs

- How do we find our project sites?
  - Enthusiastic landowners!
  - Funding sources
  - Large areas of untreated impervious cover
  - More impactful locations
- What can I do?
  - RiverSmart Homes
    - Rain Gardens
    - Permeable Pavers
    - Rain Barrels
    - Tree Planting
    - “BayScaping”



# QUESTIONS



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